REMARKS

Summary of the Invention

The invention features methods for inducing myelination of neural cells by glial cells. The methods involve contacting glial cells with amino acids 54-103 (encoded by SEQ ID NO: 150) and SEQ ID NOs: 152 and 155-159, which correspond to variably-sized sequences resulting from differentially spliced RNA transcripts encoding bovine and human glial growth factor polypeptides.

Summary of the Office Action

Claims 132, 136, 137, and 139-142 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of U.S.P.N. 6,204,241 (hereinafter the "'241 patent"). Claim 143 is objected to as being dependent from a rejected claim. By this reply, Applicants cancel claims 136, 137, 142, and 143, and amend claims 132, 139, 140, and 141.

Obviousness-Type Double Patenting Rejection

The Examiner rejects claims 132, 136-137, and 139-142 for obviousness-type double patenting over claim 11 of the '241 patent. The Examiner states that:

> although the conflicting claims are not identical, they are not patentably distinct from each other because the polypeptides administered by the process steps recited in the instant application...are all contained within SEQ ID NO: 170 of claim 11 of the instant patent...

In the interest of allowance, Applicants have cancelled the subject matter cited as the source of

the obviousness-type double patenting rejection. Specifically, Applicants have cancelled claims 136, 137, 142, and 143, and amended claims 132, 139, 140, and 141 to remove reference to SEQ ID NOs that recite those sequences that are literally found in SEQ ID NO: 170 of the '241 patent. However, as indicated in the previous Reply to Examiner's Action filed with the Patent Office on January 17, 2002, the court held in *In re Vogel* (422 F.2d 438, 164 USPQ 619 (CCPA 1970) that "if the rejected claim defines more than an obvious variation, it is patentably distinct." Applicants point out that SEQ ID NOs: 152, 155-159, and amino acids 54-103 of SEQ ID NO: 150 represent bovine and human glial growth factor polypeptides produced from variably-sized, differentially spliced RNA transcripts (see page 34, lines 2-22, of the specification) and do not contain sequence information found in SEQ ID NO: 170. Because the polypeptide fragments recited in claims 132, 139, 140, and 141, as presently amended, are not provided by SEQ ID NO: 170 and one skilled in the art would not be directed to the use of these polypeptides based on the sequence disclosed in SEQ ID NO: 170, these polypeptides do not constitute an obvious variation and are patentably distinct. Accordingly, Applicants respectfully request that the rejection of claims 132, 136-137, and 139-142 for obviousness-type double patenting over claim 11 of the '241 patent be withdrawn.

CONCLUSION

Applicants submit that the claims are now in condition for allowance, and such action is respectfully requested. If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: July 23, 2002

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Version with markings to show changes made

In the claims:

A marked-up version of claims 132, 139, 140, and 141 is presented below.

132. (Twice Amended) A method for inducing myelination of a neural cell by a glial cell, said method comprising contacting said glial cell with an amount of a polypeptide which comprises an epidermal growth factor-like domain, wherein said epidermal growth factor-like domain comprises an amino acid sequence which is identical to an amino acid sequence encoded by a GGF/p185 erb B2 ligand gene, and wherein said amino acid sequence comprises an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of:
[SEQ ID NO: 154 (EGFL1);]
SEQ ID NO: 155 (EGFL2);
SEQ ID NO: 156 (EGFL3);
SEQ ID NO: 157 (EGFL4);
SEQ ID NO: 158 (EGFL5);
SEQ ID NO: 159 (EGFL6); and
amino acids 54-103 encoded by SEQ ID NO: 150.

139. (Twice Amended) The method of claim 132 [, 136, 137] or 141, wherein said method further comprises contacting said cell with a polypeptide which binds the p185 erb B2 receptor.

140. (Twice Amended) The method of claim 132 [, 136, 137] or 141, wherein said polypeptide is a recombinant polypeptide with glial cell mitogenic activity.

141. (Twice Amended) A method for inducing myelination of a neural cell by a glial cell, said method comprising contacting said glial cell with an amount of a polypeptide which comprises an epidermal growth factor-like domain, wherein said epidermal growth factor-like domain comprises an amino acid sequence which is identical to an amino acid sequence encoded by a GGF/p185 erb B2 ligand gene, and wherein said amino acid sequence comprises the amino acid sequence provided in [is selected from the group consisting of:
SEQ ID NO: 151;]
SEQ ID NO: 152 [; and
amino acids 362-411 of SEQ ID NO: 170],
wherein said contacting with said polypeptide is sufficient to induce myelination of said neural cell by said glial cell.